

REMARKS:

Status of the Claims

Claims 1-8 were originally filed. Claims 9-17 were added in the February 11, 2004 response. Claims 1-17 stand rejected in the February 7, 2007 Office Action. Applicants respectfully request reconsideration and withdrawal of rejection in view of the following remarks.

The Claimed Invention

The claimed invention is directed to a novel composition comprising a flavor or fragrance material encapsulated in a matrix. The present inventors surprisingly discovered that a matrix of carefully selected materials at correct levels provides unexpected advantageous properties such as protecting the encapsulated material at an elevated temperature.

It is an objective of the claimed invention to provide flavor and fragrance materials in encapsulated form that are stable at elevated temperatures and/or dissolve slowly in aqueous environments. (*See*, Specification, page 1, lines 13-16) For example, in a flavor application, the flavor can be encapsulated in the matrix and not released until the matrix is compromised. (*See*, Specification, page 6, lines 14-18) Also, in a fragrance application such as laundry detergent powder or tablet, the fragrance will have a delayed release. (*See*, Specification, page 6, lines 21-24)

1. Claim Objection

Claim 1 is objected because of informalities. Correction is made by replacing the semicolon after “sugars” with a comma. Accordingly, this rejection is considered to be moot.

2. Claim Rejections - 35 U.S.C. § 102

Claims 1-17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Johnson *et al.* (US 6,479,082) or El-Nokaly (US 5,599,555);

Claims 1-17 also stand rejected under 35 U.S.C. 102(e) as being anticipated by Zerbe *et al.* (US 6,660,292).

Johnson *et al.* (US 6,479,082)

Examiner alleges that Johnson *et al.* anticipate the claimed invention by teaching a composition comprising 0.1% to about 15% by weight flavor, about 5% to about 95% by weight bulking and sweetening agents (e.g., sugar), and about 0.005% to about 1% by weight hydroxypropyl cellulose. (*See*, Office Action, page 3, lines 14-19) Applicants respectfully disagree.

Johnson *et al.*'s invention is directed a chewing gum composition having increased flavor release. (*See*, Johnson *et al.*, Abstract; col. 7, lines 5-16, Claim 1) Johnson *et al.* teach that "In practicing the . . . invention, hydroxypropyl cellulose is incorporated directly into the gum composition in its natural powder form, as opposed to being premixed with another ingredient or used as an encapsulant or an agglomerating agent." (*See*, Johnson *et al.*, col. 4, lines 6-10) In contrast, independent claim 1 of the present invention recites "[A] flavor or fragrance material encapsulated in a matrix comprising . . . hydroxypropyl cellulose . . ." Johnson *et al.* neither teach nor suggest the claimed limitation of encapsulation. In fact, Johnson *et al.* explicitly teach away using the composition in an encapsulation application. Accordingly, Applicants respectfully submit that the present invention is patentable over Johnson *et al.* For at least these reasons, Applicants respectfully request that this 35 U.S.C. § 102 rejection be withdrawn.

El-Nokaly (US 5,599,555)

Examiner further alleges that El-Nokaly anticipates the claimed invention by teaching an encapsulated flavor/fragrance comprising a flavor/fragrance, hydroxypropyl cellulose, and an additional component including for example fats, silica, starch, and emulsifiers in the amounts claimed. (*See*, Office Action, page 3, lines 20-24) Applicants respectfully disagree.

El-Nokaly discloses polymeric liquid crystals prepared from a polysaccharide and a solvent. (*See*, El-Nokaly, Abstract) El-Nokaly teaches that "[T]he . . . liquid crystals . . . are prepared by mixing the polymer with a sufficient amount of a solvent within the critical concentration and temperature ranges." (*See*, El-Nokaly, col. 3, lines 25-28) In the section of "Preparation of the Liquid Crystal", El-Nokaly continues to teach that liquid crystals of hydroxypropyl cellulose are prepared at a temperature range of from 25°C to 45°C. (*See*, El-

Nokaly, col. 8, lines 55-60) El-Nokaly further explains that “At higher concentrations and higher temperatures additional phases, such as gel and/or solid phases, can form in addition to or to the exclusion of the liquid crystal base. However, it is the one phase liquid crystal which is desired for the purposes of this invention” (See, El-Nokaly, col. 8, line 65 to col. 9, line 3) Therefore, the temperature range taught by El-Nokaly (i.e., 25°C to 45°C) is critical for obtaining and maintaining the one phase liquid crystal of hydroxypropyl cellulose. The one phase liquid crystal is lost at higher temperatures.

In contrast, the present invention discloses a matrix incorporating hydroxypropyl cellulose, at the recited levels, with recited viscosity values, remains encapsulated at temperatures greater than about 130°C, which is far greater than a temperature of between 25°C to 45°C as disclosed in El-Nokaly. El-Nokaly does not teach or suggest hydroxypropyl cellulose of the recited levels with recited viscosity values in the present invention, which provides unexpected improved temperature profile properties of the encapsulation materials (i.e., the flavor or fragrance material remains encapsulated at temperatures greater than about 130°C). For at least these reasons, Applicants respectfully request that this 35 U.S.C. § 102 rejection be withdrawn.

Zerbe et al. (US 6,660,292)

Examiner continues to allege that Zerbe *et al.* anticipate the claimed invention by teaching a composition comprising from about 20% to about 70% hydroxypropyl cellulose, from about 5% to about 70% modified starch, and up to about 60% of a flavor ingredient. (See, Office Action, page 3, line 25 to page 4, line 3)

In response to this rejection, Applicants submit a Declaration under 37 CFR § 1.131 proving the conception and reduction-to-practice of the present invention is prior to the filing date of Zerbe *et al.* and thereby antedating the Zerbe *et al.* reference.

Even *arguendo*, were Zerbe *et al.* an appropriate 102(c) reference, Zerbe *et al.* teach that “[A]n improved rapidly disintegrating flavored film . . . is comprised of a polymer base consisting of a mixture of hydroxypropyl cellulose and modified starch, a film-forming agent,

and a flavor ingredient.” (*See, Zerbe et al.*, col.3, lines 27-33) *Zerbe et al.* disclose “The flavored films of this invention may be prepared by mixing the hydroxypropyl cellulose, modified starch, flavoring and other ingredients in water to produce a solution . . . and dried to form a flavored film.” (*See, Zerbe et al.*, col. 5, lines 36-40) *Zerbe et al.* neither teach nor suggest the claimed limitation of encapsulation. Accordingly, Applicants respectfully submit that the present invention is patentable over *Zerbe et al.*

For at least these reasons, Applicants respectfully request that this 35 U.S.C. § 102 rejection be withdrawn.

CONCLUSION:

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of rejections, and allowance of all claims now present in the application.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment to the Deposit Account No. 12-1295.

Respectfully submitted,



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